Space based aviation applications

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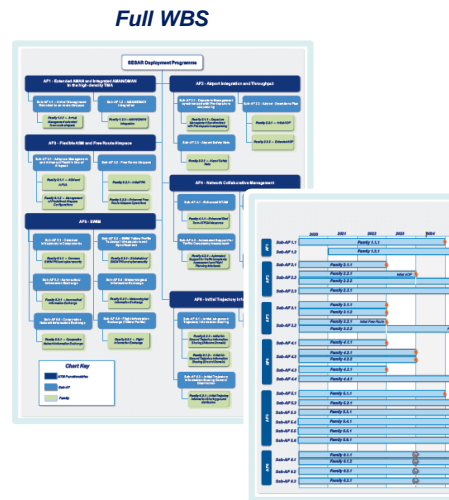**World ATM Conference, Madrid, 22 June 2022**

SESAR Deployment Programme
A common blueprint for operational stakeholders to implement CP1

The **SESAR Deployment Programme** features fully up-to-date information on **target dates**, **system requirements**, **specific deployment milestones**, **synchronisation needs**, expected performance impacts and many more

Full WBS

Detailed descriptions

Synchronisation needs

Matching SOL and OBJ

Performance benefits
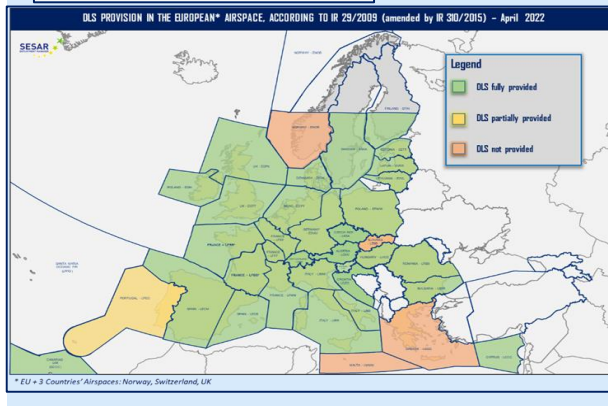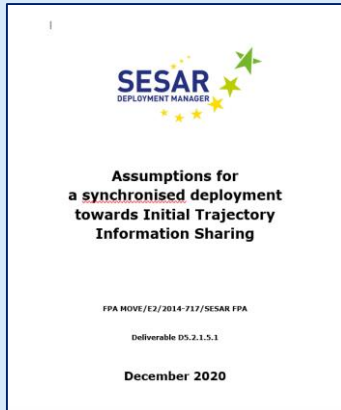
GANTT Chart

Impacted stakeholders

Intermediate milestones

SDM experience coordinating CNS deployment

Communications

DLS

Navigation

PBN

Surveillance

ADS-B

Modernising Air Traffic Management As One - © SESAR Deployment Manager 2022
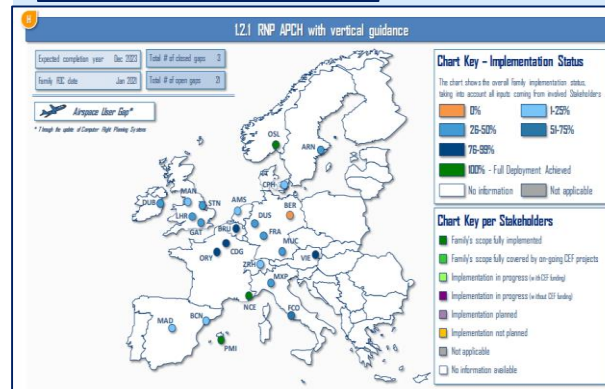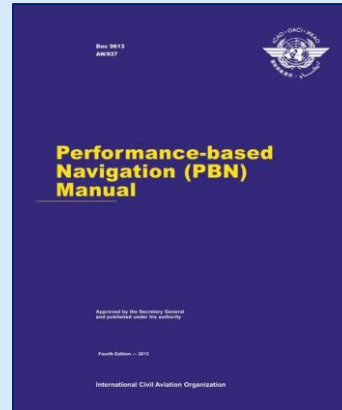
Communication. SATCOM

SDM Deliverable: *Assumptions for a synchronized deployment towards Initial Trajectory Information Sharing*

enabling better performance and efficiency

SatCOM roadmap – based on "IRIS"

SDM, together with the stakeholders, to develop a multilink implementation roadmap

Navigation. GBAS and GALILEO

Deployment status:

- GAST D (CAT III on GPS only)
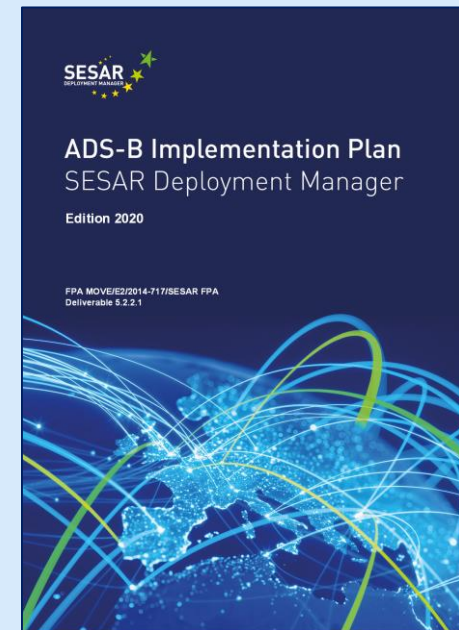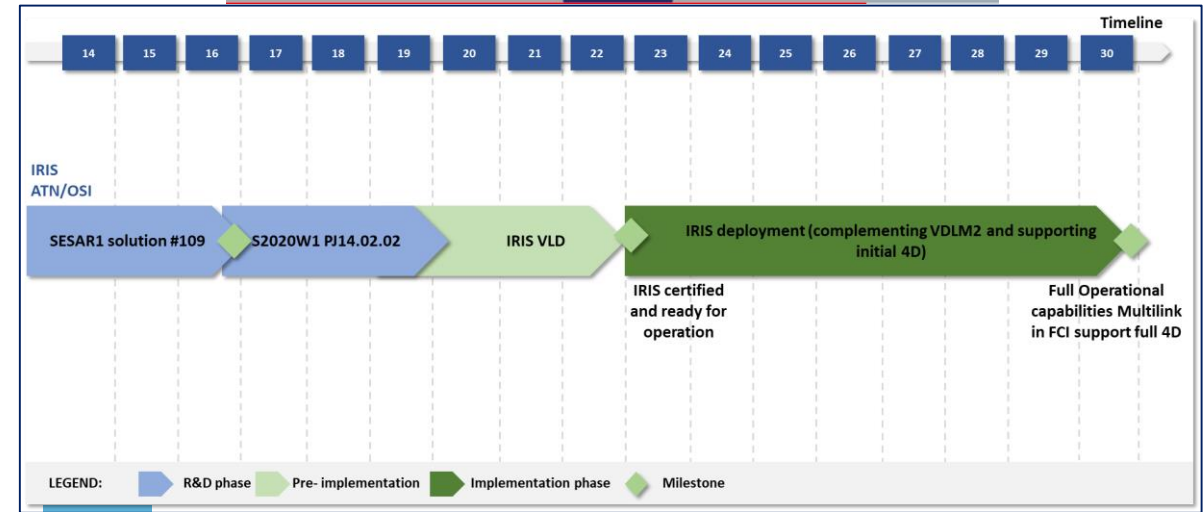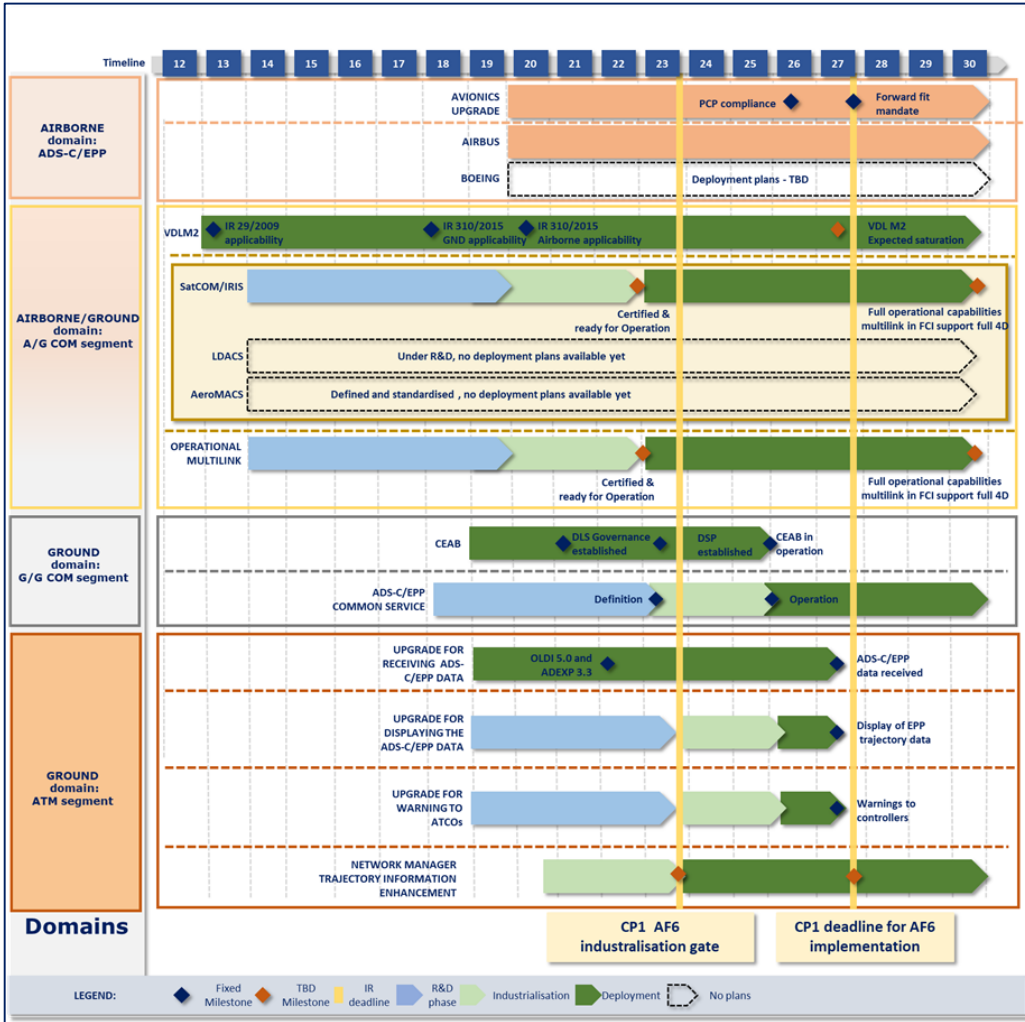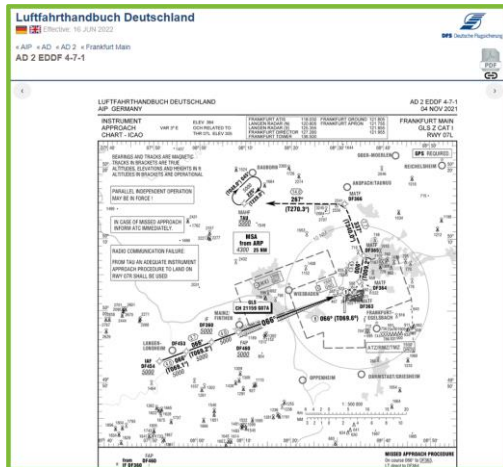 - Standardized in Annex 10 since 2018
  - Airborne equipment expected 2023 (B777-9), 2025 ? (Airbus)
  - Ground stuck at certification amid pandemic
- EU proposal at ICAO NSP JWGs/8 to implement "GAST D +" as transition towards GAST F
  - Adding GALILEO to the GAST D standard
  - Gain experience with MC in GAST D (compatible to existing GAST D avionics)
  - In a second step complete with full DFMC performance standard
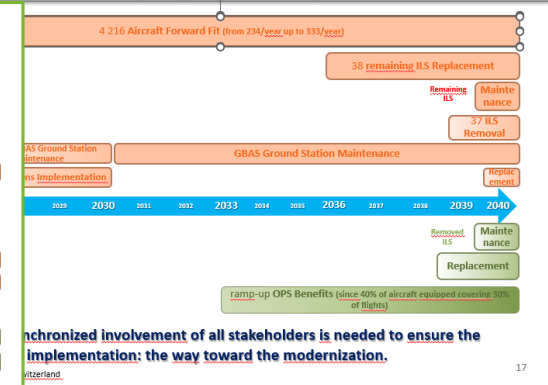
● **SDM supported _Enabling European GBAS Growth_ (EGG)**

● **SDM elaborated a GBAS CBA**

Surveillance. Satellite-based ADS-B Out

Implementation status in Europe
Satellite-based ADS-B coverage

■ Operational
■ Under implementation
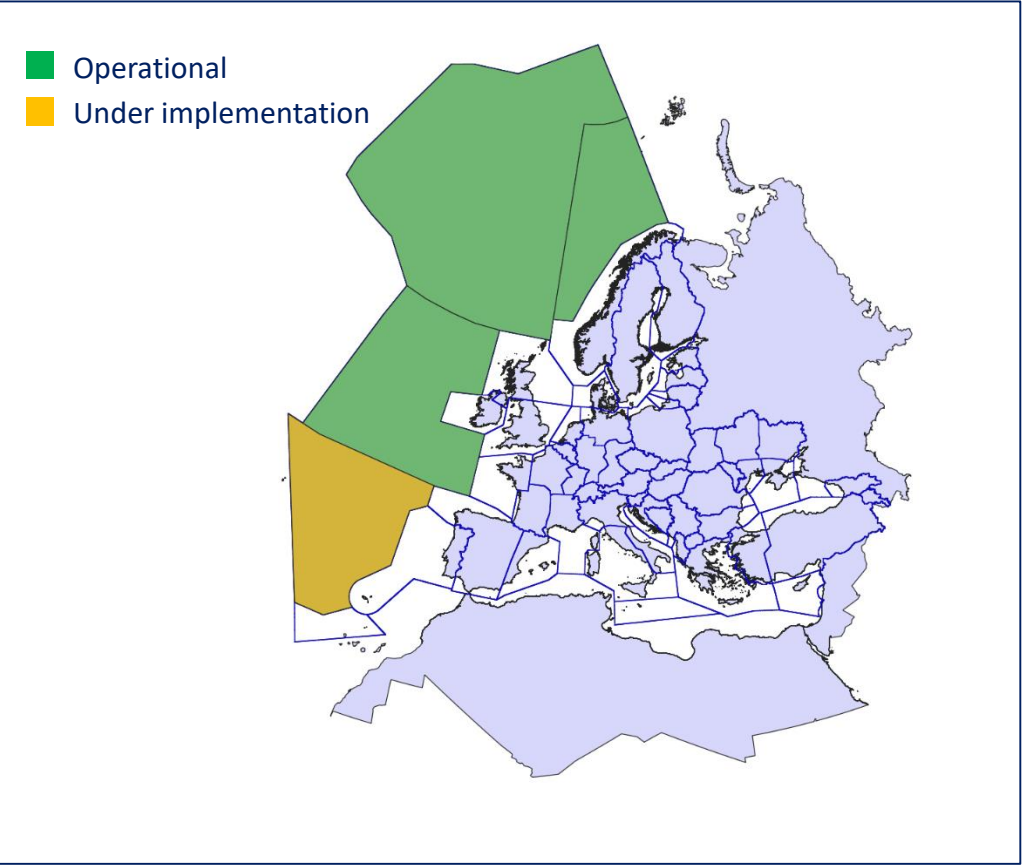
Pros

- Global coverage, independent of terrain

- Can independently validate position using TDOA

Cons

- Performance weaker towards the equator due to more sparse constellation configuration

- Difficult to meet terrestrial ADS-B on cost and update probability at high update rates

- Detection issues in aircraft with bottom-only

Modernising
Air Traffic Management
As One

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